

REMARKS

Claims 1-13 and 15 were presented for examination. Claims 1-13 and 15 were rejected. Claims 1, 2, 4, 12 and 13 have been amended. Basis for the amended language may be found in the specification at, for example, page 6, paragraph [0017].

Rejections Under 35 USC §102(b)

Claims 1, 2, 4, 12 and 13 were rejected under 35 USC §102(b) as being anticipated by Funakubo (newly-cited). Applicants respectfully traverse.

Claim 1 recites "a fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe, said fast scanning stage comprising, at least one fixed support, and a sample stage having at least one axis of translation, said sample stage being affixed to said at least one fixed support by means for causing displacement of said sample stage relative to said probe through the application of a bias voltage of 100 volts or less."

Funakubo (English Abstract) recites an oscillation type stage device. However, Funakubo fails to disclose the "displacement of said sample stage .... through the application of a bias voltage of 100 volts or less." Instead, Funakubo discloses a piezoelectric actuator impressed with an AC *high* voltage from an AC *high* voltage power supply expanding and contracting to reciprocate a stage (see Abstract).

Further, Funakubo (Abstract and drawings) does not teach "a fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe .... said sample stage being affixed to said at least one fixed support by means for causing displacement of said sample stage relative to said probe." While the Examiner asserts in the Office Action that Funakubo contains such a teaching, the Examiner references text from the Japanese publication in violation of MPEP 706.02 II. That section of the MPEP provides that "If the document is in a language other than English and the examiner seeks to rely on that document, a translation *must be obtained* so that the record is clear as to precise facts the examiner is relying upon in support of the rejection." Therefore, Applicants submit that claim 1 is not anticipated by Funakubo

(English Abstract) and request that the Examiner withdraw his rejection to claim 1. If the Examiner continues to rely on the text of Funakubo, the Examiner is requested to comply with the requirements of MPEP §706.02.

Independent claims 2, 4, 12 and 13 as amended, also recite the "displacement through the application of a bias voltage of 100 volts or less of said sample stage" as recited in claim 1. Further, independent claims 2, 4, 12, and 13 also recite that the "fast scanning stage for a scanning probe microscope, said scanning probe microscope including a probe .... said sample stage being affixed to said at least one fixed support by means for causing displacement of said sample stage relative to said probe." Therefore, for the same reasons discussed above, Applicants submit that claims 2, 4, 12 and 13 are also not anticipated by Funakubo, and request that the Examiner withdraw his rejection of claims 2, 4, 12 and 13.

#### Rejections Under 35 USC §103(a)

Claims 3, 5 and 6 were rejected under 35 USC §103(a) as being unpatentable over Funakubo in view of Sarkar. Applicants respectfully traverse.

Claims 3, 5 and 6 depend from the independent claim 2 either directly or ultimately. These dependent claims are patentable for the same reasons as presented above with respect to the claims from which they depend. Further, the dependent claims also include additional features that distinguish them from the prior art. For example, claim 3 recites that "said sample stage comprise four actuator elements supporting said sample stage." Funakubo fails to disclose four actuator elements and Sarkar fails to disclose four actuator elements that support the sample stage. In contrast, Sarkar discloses four actuators (Fig. 2, elements 203a-d) coupled to four flexures (Fig. 2, elements 201a-d) that are then connected to a stage (Fig. 2, element 202). Therefore, Applicants assert that claims 3, 5 and 6 are also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

Claim 7 was rejected under 35 USC §103(a) as being unpatentable over Funakubo in view Sarkar as applied to claim 6 and in view of Pai et al. Applicants respectfully traverse this

rejection.

Claim 7 ultimately depends from the independent claim 2. This dependent claim is patentable for the same reasons as presented above with respect to the claims from which it depends. Therefore, Applicants submit that claim 7 is also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

Claim 8 was rejected under 35 USC § 03(a) as being unpatentable over Funakubo as applied to claim 2 and in view of Elings. Applicants respectfully traverse.

Claim 8 directly depends from the independent claim 2. This dependent claim is patentable for the same reasons as presented above with respect to the claims from which it depends. Therefore, Applicants assert that claim 8 is also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

Claims 9 and 10 were rejected under 35 USC §103(a) as being unpatentable over Funakubo as applied to claims 2 and 3 and in view of Zdeblick. Applicants respectfully traverse.

Claims 9 and 10 depend from the independent claim 2 either directly or ultimately. These dependent claims are patentable for the same reasons as presented above with respect to the claims from which they depend. Further, the dependent claims also recite additional features that distinguish them from the prior art. For example, claims 9 and 10 disclose that "said at least one actuator element comprises a PZT bimorph." Funakubo does not disclose a PZT biomorph actuator and Zdeblick does not disclose a stage supporting actuator element. Therefore, Applicants submit that claims 9 and 10 are also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

Claim 11 was rejected under 35 USC §103(a) as being unpatentable over Funakubo as applied to claim 1 and in view of Marchman. Applicants respectfully traverse this ground of rejection.

Claim 11 directly depends from the independent claim 1. This dependent claim is

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patentable for the same reasons as presented above with respect to the claims from which it depends. Further, the claim 11 also recites additional features that distinguish it from the prior art. For example, both Funakubo and Marchman fail to disclose a "sample stage ... comprised of a material selected from the group consisting of ... heat resistant polymers, and anodized aluminum." Therefore, Applicants assert that claim 11 is also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

Claim 15 was rejected under 35 USC §103(a) as being unpatentable over Funakubo as applied to claim 13 and in view of the publication of Ando et al. Applicants respectfully traverse this ground of rejection.

Claim 15 directly depends from the independent claim 13. This dependent claim is patentable for the same reasons as presented above with respect to the claims from which it depends. Therefore, Applicants assert that claim 15 is also patentable over the prior art and request that the Examiner withdraw his rejection thereof.

#### Conclusion

For the above reasons, Applicants respectfully submit that the above claims as amended represent allowable subject matter. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,  
DINSMORE & SHOHL LLP

By /Kristina Swanson/  
Kristina E. Swanson  
Registration No. 53,657

One Dayton Centre

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Docket : 10060298/MOL 0077 PA/40518.112

One South Main Street, Suite 1300  
Dayton, Ohio 45402-2023  
Telephone: (937) 449-6400  
Facsimile: (937) 449-6405  
KES/